REMARKS

Upon careful and complete consideration of the Office Action dated August 27, 2003, applicants have amended the claims which, when considered in conjunction with the comments herein below, are deemed to place the present application into condition for allowance. Favorable reconsideration of this application, as amended, is respectfully solicited.

Before addressing the present office action, applicants wish to thank the Examiner for his reconsideration of this application based on the previously filed response and for withdrawal of the finality of the previous office action.

Turning back to the action at hand, claims 1-6, 19, 21 and 24 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 3,274,190 to Gray et al. (hereinafter referred to as "Gray et al."). In making the rejection, the Office Action acknowledged that

> "Gray differs from the instant claims in not exemplifying compounds having amino or substituted amino groups on 4 and 6 positions. However, Gray et al. clearly teaches equivalency of the exemplified Het core and the substituents on them shown in the examples with those claimed for the general formula as seen in column 2, lines 33-64."

Based on this reasoning, the Office Action then concluded that "it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds variously substituted in pyrimidine ring taught in the examples 7-40 and the aryl ring as permitted by the reference and expect resulting compounds (instant compounds) to possess the uses taught by the art in view of the equivalency teaching outlined above."

Applicants do not disagree that Gray et al. suggest very broadly the equivalency of all ring systems having six pi electrons (Gray et al. at column 2, lines 37-38). More particularly, Gray et al. state that the phenyl moiety and the polyhetero-monocyclicaryl moiety include as the full equivalent of each, respectively, the unsubstituted phenyl radical and the unsubstituted polyhetero-monocyclicaryl radical, and such radicals bearing on the ring, in place of a hydrogen atom or atoms, one or more simple substituents not adversely affecting the pharmacological properties of the generalized structure (see Gray et al. at column 2, lines 48-64). Thus, Gray et al. teach the equivalency between a phenyl radical and a pyrimidine radical, and equivalency between a simple amino group and a lower-alkoxy or a lower-alkylthio group. It is stressed, however, that Gray et al. do not teach the equivalency between simple unsubstituted amino groups (as exemplified by Examples 22, 40 and 45 of Gray et al.) and substituted amino groups, such as those present on the pyrimidine ring as claimed in the present invention.

The Examiner's attention is respectfully directed to Gray et al., column 2, line 59, wherein only an amino (NH_2) group is recited. Although Gray et al. speaks of "one or more simple substituents", and specifically goes on to recite hydroxy (OH) and lower-alkoxy (OR), as well as mercapto (SH) and lower-alkylthio (SR) groups (see Gray et al. at column 2, lines 48-64), the fact that the mention of any substituted amino (NHR or NR_2) groups was blatantly omitted, it is respectfully submitted that Gray et al. teach away from complex substituents such as substituted amino groups as claimed in the present invention. Stated in another way, it is respectfully submitted that there is no teaching or suggestion by Gray et al. of substituted amino groups (for example, lower-alkyl amino)

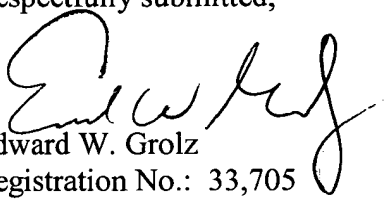
as substituents on the polyheteromonocyclic aryl moiety. Gray et al. solely recite "amino" while for corresponding substituents, such as hydroxyl and mercapto, Gray et al. have clearly indicated that the hydrogens of these groups can be replaced with a lower-alkyl group. This possibility was not stated for the amino group. This omission is glaring in that if Gray et al. had intended to describe substituted amino groups, they would have defined lower-alkyl amino groups as substituents as they did for the hydroxyl and mercapto groups. Accordingly, it is respectfully submitted that Gray et al. do not teach or suggest any compounds of formula I wherein one or both of R^4 and R^5 is a substituted amino group.

It is based on the above arguments that applicants have amended claims 1 and 20 by deleting the simple amino group as a substituent of R^4 and R^5. It is respectfully submitted that in doing so, no new matter has been added by this amendment. Support for the current amendment can be found throughout the specification, e.g., at page 3, lines 16-17. Again, Gray et al. do not teach or suggest any substituted amino groups as now claimed in the present invention or provide motivation for a person of ordinary skill in the art to make compounds with substituted amino groups. Applicants therefore respectfully request withdrawal of the rejection of claims 1-6, 19, 21 and 24 under 35 U.S.C. §103(a).

Claims 20 and 25-26 have been objected to for allegedly depending upon a rejected claim. Claim 1, upon which claims 20 and 25-26 depend, has been amended and is believed to be in an allowable condition. Accordingly, applicants respectfully request withdrawal of this objection and allowance of all the pending claims.

In view of the foregoing, it is firmly believed that all the claims of the present application contain patentable subject matter and a Notice of Allowance is earnestly solicited.

Respectfully submitted,



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